



## PHOSPHORUS (White or yellow)

### Agent Overview:

White phosphorus is extremely toxic. It is used to manufacture: munitions (hand grenades, mortar and artillery rounds, and smoke bombs); pyrotechnics, explosives (incendiary agent or munitions ignition); rodenticides, artificial fertilizers, semiconductors; and electroluminescent coating. When exposed to air, phosphorus spontaneously ignites and becomes luminous in the dark; this property is conveyed to "tracer bullets." The extreme heat produces dense white smoke and a yellow flame. Inhalation exposure may result in respiratory tract irritation and coughing. Chronic exposure results in necrosis of the jaw, termed "phossy jaw." Oral exposure to high levels occurs in three stages: gastrointestinal effects (first stage); two days symptom-free (second stage); followed by a rapid decline in condition with gastrointestinal effects (third stage), plus severe effects on the kidneys, liver, cardiovascular system, and central nervous system.

### Lab Specimen Submittal:

Authorization by Dr. Jane Getchell, Director DPHL; Christina Pleasanton, Deputy Director DPHL; or Tara Lydick, Chemical Terrorism Coordinator.

### Type of Specimens

Urine: 25mL-50mL screw-cap container

### Necessary for Testing:

Whole blood:

- Three, 5 or 7 mL purple-top (EDTA) tubes (vacuum fill only) AND
- One, 5 or 7 mL gray-top or green-top (vacuum fill only) AND
- Two empty urine cups and two empty blood tubes for each lot # submitted.

### Packaging Instructions:

Urine: freeze specimen upon collection and ship on dry ice; label specimens and package individually; wrap with absorbent material.

Whole blood: place filled tubes in a shipping rack for stability, wrap the tubes in absorbent material, and secure with tape. Place the packaged tubes in a secondary unbreakable container. Specimens may be shipped cold but *must not* be frozen.

All: wrap sample containers and layers with tamper-proof, waterproof forensic evidence tape initialed by collector, being careful not to cover the sample labels. Ship to DPHL as Biological Substance, Category B (Packing Instruction 650).

### Receiving Specimens at DPHL:

Authorized specimens are received at the lab's rear (loading dock) entrance. Submitters must present ID and complete proper forms.

### Handling of Specimens:

Follow chain of custody procedures. Freeze urine specimens.

### Reporting Results:

Reference laboratory will notify DPHL as soon as possible. The Potential Exposure Call Log and Information form will provide information for notification of testing results outside of the DPHL.

### Contact Information:

Jane Getchell, DrPH, Director DPHL, 302-223-1520 (24/7 coverage)

**24/7 Emergency Contact Number: 1-888-295-5156**

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